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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.                | CONFIRMATION NO.       |
|--|-------------|----------------------|------------------------------------|------------------------|
| 10/792,075   | 03/02/2004  | Se Kit Yuen          | AGUP040338-JML                     | 4201                   |
| 7590<br>Dr. Arthur King Ma<br>1030 Coronado Drive<br>Arcadia, CA 91007 | 09/17/2007  |                      | EXAMINER<br>MCDONALD, RODNEY GLENN |                        |
|  |             |                      | ART UNIT<br>1753                   | PAPER NUMBER           |
|  |             |                      | MAIL DATE<br>09/17/2007            | DELIVERY MODE<br>PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                                |                  |
|------------------------------|--------------------------------|------------------|
| <b>Office Action Summary</b> | Application No.                | Applicant(s)     |
|                              | 10/792,075                     | YUEN, SE KIT     |
|                              | Examiner<br>Rodney G. McDonald | Art Unit<br>1753 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 3, the word “sharp” is unclear.

Claim 1, line 5, the word “mean” should be “means”.

Claim 1, line 6, the word “mean” should be “means”.

Claim 1, line 9, the phrase “said extractor fan mean” lacks antecedent basis.

Claim 1, line 11, the word “mean” should be “means”.

Claim 1, line 13, the word “mean” should be “means”.

Claim 1, line 17, the phrase “said air drawing means” lacks antecedent basis.

Claim 1, line 22, “up circuit.” is unclear because the claim has a period in the middle of it. Should the claim end here?

Claim 1, line 26, the phrase “said extractor fan” should be “said extractor fans”.

Claim 1, lines 26, 27, the phrase “said air exhaust frame trellis device” lacks antecedent basis.

Claim 1, line 27, the phrase “said extractor fan” lacks antecedent basis.

Claim 1, line 30, the phrase “comprises of” should be “comprising”.

Claim 1, line 32, the word “sharp” should be “shape”.

Claim 1, line 33, the word “sharp” should be “shape”.

Claim 1, line 34, the word “affixing” should be “affixed”.

Claim 1, line 34, the word "compartment" should be "compartments".

Claim 2, line 2, the word "sharp" should be "shape".

Claim 2, line 3, the word "sharp" should be "shape".

Claim 5, line 2, the phrase "said body" lacks antecedent basis.

Claim 5, line 4, "LBD's" is unclear.

Claim 6 is indefinite because it appears to recite features already present in claim 1.

Claim 9, line 3, is indefinite because there is a period in the middle of the claim.

Claim 10, line 3, is indefinite because there is a period in the middle of the claim.

Claim 11, line 2, the phrase "the body" lacks antecedent basis.

Claim 11, line 4, is indefinite because there is a period in the middle of the claim.

Claim 11, line 5, is indefinite because "LBDs" is unclear.

Claim 12 is indefinite because it is unclear how the air inlet can be coming from the front and the rear of the body.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Sham et al. (U.S. Pat. 6,464,760).

Regarding claim 12, Sham et al. teach an air purifier having a fan (column 4 lines 10-11), a transformer (column 4 line 33), a circuit board (column 4 lines 32), and an ultraviolet ray radiation tube (column 4 line 37). The body is equipped with an air inlet (Column 4 lines 23-24) and an air outlet (Column 4 lines 11). The air inlet and outlet are provided with a trellis device. The air inlet and outlet are located on the body. (See Fig. 1) The intake frame trellis device provides an air inlet and is used as a fixed dustproof frame, dustproof net, and dustproof cover. (Column 4 lines 16-17) The fan is kept close to the inner surface of the air exhaust frame trellis device. (Column 4 lines 10-11; Fig. 1) There is an air collector provided between the air inlet and the extractor fan. The ultraviolet ray radiation tube lies in the center of the air collector. (Fig. 3-5; column 4 lines 40-52)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sham et al. (U.S. Pat. 6,464,760) in view of Wang (U.S. Pat. 5,702,507), Golstein (U.S. Pat. 4,210,429), Yoshikawa (U.S. Pat. 5,492,677) and Morrow et al. (U.S. Pat. 5,656,242).

Regarding claims 1, 6, Sham et al. teach an air purifier having a three-dimensional, square columnar structure housing for actuating an assemblage having a plurality of air inlets and a plurality of air outlets with predetermined shape. (see Figs. 1-5) The air purifier includes a fan means for drawing air into the housing through the air-inlet. (Column 4 lines 9-11) A ultra-violet tube means. (column 4 lines 34-36) An air outlet for drawing air out of the housing. (Column 4 line 11) An air aggregator in the form of a HEPA filter is provided between the fan and the housing. (Column 4 lines 17-19) An ultraviolet radiation tube means for generating ultraviolet rays. The air inlet and air outlet connected at both ends of the ultraviolet radiation tube means. (Column 4 lines 30-39) An electric circuit with a voltage transformer connected with an indicator light, a start electrically connected via the electric circuit to the ultraviolet radiation tube. (Column 4 lines 32-37) A switch on the housing electrically connected via the electric circuit and a plug on an electric cord connected to an electric circuit to engage a wall socket to receive electricity therefrom. (Column 4 lines 30-39; Column 1 lines 34-45) A circuit for controlling the UV light. (Column 4 lines 30-39) An air intake frame trellis device is provided at a portion of the body. An intake frame trellis device provides the

air inlet and is used as a fixed dustproof frame, dustproof net, a dustproof cover. (Column 4 lines 16-17) The fan is kept close to an inner surface of the exhaust frame trellis. (Column 4 lines 9-12) There is an air collector between the air inlet and the extractor fan. (See Fig. 3) The ultraviolet ray radiation tube lies in a center portion of the air collector. (Column 4 lines 40-52) The ultraviolet radiation tube wherein a carbon fiber strip is affixed thereby providing means for eliminating virus. (Column 4 lines 40-52) A guarding wall which has a size and shape. A metal spring conductor and a metal conductor are affixed to charge the ultraviolet ray tube. (Column 4 lines 40-60)

Regarding claim 4, a support frame is mount on the side inside the body, an electronic converter and an electronic generator of power supply are provided at an upper end thereof. (Column 5 lines 35-37) A power socket for connecting to a municipal power is provided on a side surface of the body. (see Fig. 5; Column 1 lines 40-45)

Regarding claim 7, Sham et al. teach a UV sterilization chamber 16 which is composed of walls to prevent UV radiation from leaving the purifier. (Column 4 lines 40-52)

Regarding claim 8, Sham et al. teach a UV sterilization chamber 16 which is composed of walls to prevent UV radiation from leaving the purifier. (Column 4 lines 40-52)

Regarding claim 9, a support frame is mount on the side inside the body, an electronic converter and an electronic generator of power supply are provided at an upper end thereof. (Column 5 lines 35-37) A power socket for connecting to a

municipal power is provided on a side surface of the body. (see Fig. 5; Column 1 lines 40-45)

Regarding claim 10, a support frame is mount on the side inside the body, an electronic converter and an electronic generator of power supply are provided at an upper end thereof. (Column 5 lines 35-37) A power socket for connecting to a municipal power is provided on a side surface of the body. (see Fig. 5; Column 1 lines 40-45)

The differences between Sham and the present claims is that utilizing two extractor fans is not discussed (Claims 1, 3), a high negative voltage discharge/carbonated fiber is connected between the ultraviolet radiation tube and the air outlet is not discussed (claims 1, 6) and an assembly of ultraviolet radiation tubes is not discussed (claims 1, 2).

Regarding utilizing two extractor fans (Claims 1, 3), Wang teach utilizing two extractor fans for moving air in and out of an air cleaner. (See Fig. 1; Column 2 lines 21-22)

The motivation for utilizing the features of Wang is that it allows for pumping air. (See Abstract)

Regarding utilizing a high negative voltage discharge/carbonated fiber is connected between the ultraviolet radiation tube and the air outlet (Claims 1, 6), Golstein suggest providing a carbon filter between the ultraviolet radiation tube and the air outlet. (Column 4 lines 46-48) Yoshikawa suggest that a carbon filtered by charged for collecting particles. (Column 4 lines 36-42; column 4 lines 50-68)

The motivation for utilizing the features of Golstein and Yoshikawa is that it allows for removing impurities from an air stream. (See Golstein Abstract; Yoshikawa Abstract)

Regarding utilizing an assembly of ultraviolet radiation tubes (Claims 1, 2), Morrow et al. teach utilizing an assembly of ultraviolet radiation tubes. (Column 2 lines 18-21)

The motivation for utilizing an assembly of ultraviolet tubes is that it allows for purifying the air. (See Abstract)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Sham et al. by utilizing the features of Wang, Golstein, Yoshikawa and Morrow et al. because it allows for moving air to be purified.

Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over as applied to claims 1-4 and 6-10 above, and further in view of Hak (U.S. Pat. 6,494,940).

The difference not yet discussed is a quadrant hole on a front end surface of the body, in which a power supply switch for controlling the extractor fan and the ultraviolet ray radiation tube is not discussed (Claims 5, 11) and there is a hole above the quadrant hole in which LCDs for indicating functions is not discussed (Claims 5, 11).

Regarding claims 5, 11, Hak teach a quadrant hole on a front end surface of a body of an air purifier, in which a power supply switch for controlling the extractor fan

and the ultraviolet ray radiation tube is provided. (Column 8 lines 49-66) A LCD screen is provided for indicating functions. (Column 8 lines 49-66)

The motivation for utilizing the features of Hak is that it allows for purifying air.

(See Abstract)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized the features of Hak because it allows for purifying air.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 of copending Application No. 10/751,130 in view of Morrow et al. (U.S. Pat. 5,656,242).

Although the conflicting claims are not identical, they are not patentably distinct from each other because all the limitations of the claims are suggested by claims 1-11 of the copending Application except for the use of a plurality of ultraviolet radiation tubes.

Regarding utilizing an assembly of ultraviolet radiation tubes, Morrow et al. teach utilizing an assembly of ultraviolet radiation tubes. (Column 2 lines 18-21)

The motivation for utilizing an assembly of ultraviolet tubes is that it allows for purifying the air. (See Abstract)

Therefore, it would have been obvious to one of ordinary skill in the art the invention was made to have modified Application No. 10/751,130 by utilizing the features of Morrow et al. because it allows for purifying the air.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 10/861,421 in view of Morrow et al. (U.S. Pat. 5,656,242). Although the conflicting claims are not identical, they are not patentably distinct from each other because all the limitations of the claims are suggested by claims 1-9 of the copending Application except for the use of a plurality of ultraviolet radiation tubes.

Regarding utilizing an assembly of ultraviolet radiation tubes, Morrow et al. teach utilizing an assembly of ultraviolet radiation tubes. (Column 2 lines 18-21)

The motivation for utilizing an assembly of ultraviolet tubes is that it allows for purifying the air. (See Abstract)

Therefore, it would have been obvious to one of ordinary skill in the art the invention was made to have modified Application No. 10/861,421 by utilizing the features of Morrow et al. because it allows for purifying the air.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney G. McDonald whose telephone number is 571-272-1340. The examiner can normally be reached on M-TH with every Friday off..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Rodney G. McDonald  
Primary Examiner  
Art Unit 1753

RM  
September 6, 2007